

IN THE CLAIMS:

1. (Currently Amended) A solid-state image sensor device having an image sensing portion performing photoelectric conversion in ~~unit of picture elements and being able to correspond to~~ both progressive mode in which all picture element signals ~~obtained by the scanning of one time in said image sensing portion being~~ are output independently, and interlaced mode in which a plurality of times of interlaced scannings ~~being~~ are performed and the picture element signals obtained in respective scannings in said image sensing portion ~~being~~ are superimposed superposed, said sensor device comprising:

a photodiode within the image sensing portion; and
a substrate-bias generation circuit for applying a bias voltage to the substrate of said image sensing portion and for controlling said bias voltage in said progressive mode to be smaller than said the bias voltage while operating in the said interlaced mode.

2. (Currently Amended) A driving method for a solid-state image sensor device having an image sensing portion including a photodiode within the image sensing portion for performing photoelectric conversion ~~in the unit of picture elements and being able to correspond to said image sensing portion operating in~~ both progressive mode in which all picture element signals ~~obtained by scanning of one time in said image sensing portion~~ are output independently, and interlaced mode in which a plurality of times of interlaced scanning ~~being~~ scannings are performed and picture element signals obtained in respective scannings ~~being~~ are superimposed superposed, wherein in said method including applying a bias voltage to the substrate of said image sensing portion, ~~in wherein during~~ said progressive mode ~~the value of~~ said bias voltage being made is smaller than that in said interlaced mode.

3. (Currently Amended) A camera ~~being composed~~ comprised of a solid-state image sensor device having an image sensing portion for performing photoelectric conversion ~~in unit of picture elements~~ and a substrate-bias generation circuit, an optical system ~~leading in an~~ receiving incident light from a subject and forming an image on said image sensing portion of said solid-state image sensor device, a driving system for driving said solid-state image sensor device, and a signal processing system for processing the signal output from said solid-state image sensor device to obtain a video signal, wherein the image sensing portion includes a photodiode structure, and further

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wherein said driving system ~~for driving said solid-state image sensor device in changing over~~ selectively operates in progressive mode in which all picture element signals ~~obtained by the scanning of one time in said image sensing portion being~~ are output independently, and interlaced mode in which ~~the scannings of a plurality times being of~~ scannings are performed and the picture element signals obtained in respective scannings ~~in said image sensing portion being~~ are superimpose superposed, and wherein the bias voltage to be applied to the substrate in said progressive mode ~~being controlled to be~~ is smaller than that in said interlaced mode ~~by said substrate bias generation circuit~~.

Please add the following new claims:

4. (Newly Added) The solid state image sensor device of claim 1, wherein the substrate bias generation circuit adjusts the substrate bias voltage during the progressive mode of operation such that a potential difference is generated between a doped region and a well of the photodiode which is greater than during interlaced operation.

5. (Newly Added) The method of driving a solid state image sensor device of claim 2, wherein the step of applying the substrate bias voltage during the progressive mode of operation is performed such that a potential difference is generated between a doped region and a well of the photodiode which is greater than during interlaced operation.

Claim 6

6. (Newly Added) The camera of claim 3, further comprising: applying the substrate bias voltage during the progressive mode of operation such that a potential difference is generated between a doped region and a well of the photodiode which is greater than during interlaced operation.